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ABSTRACT

A survey was conducted of correlations of the use of microcomputers for instruction in schools and districts to the other variables of student enrollment, district wealth, expenditures per pupil, and demographic characteristics. Information was gathered by telephone interviews with 100 percent of the United States public school districts. Results demonstrated that the larger the student enrollment, the more likely the district is to have microcomputers. Urban and suburban schools, and schools in wealthier communities are also more likely to have microcomputers. Two out of three microcomputer supervisors have no other district-level job functions. While districts with less than 1 percent Black or Hispanic minorities tend to be rural districts with a lower percentage of microcomputers, districts with some minorities are more likely to have microcomputers if the minority percentage is low. Across all school types, student enrollment is an extremely strong predictor of the presence of microcomputers, and, similarly, student enrollment is the single strongest predictor of district use. This report consists primarily of detailed data tables. (LMM)

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MICROCOMPUTER USAGE IN THE CLASSROOM
1981-1982

Presentation to:

NAVA Materials Council

January, 1982

[Jeanne Hayes]

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HOW DID QED OBTAIN ITS MICROCOMPUTER DATA?

- CALLED EVERY SCHOOL DISTRICT*
- ASKED IF THE DISTRICT USED MICROCOMPUTERS FOR INSTRUCTION
- IF YES, ASKED IF APPLE, RADIO SHACK, COMMODORE OR OTHER
- IF YES, ASKED NAME OF MICROCOMPUTER SUPERVISOR FOR DISTRICT
- ASKED WHICH SCHOOLS USED MICROCOMPUTERS FOR INSTRUCTION
- ASKED BRAND USED PER SCHOOL
  APPLE, RADIO SHACK, COMMODORE OR OTHER

WHAT MICROCOMPUTER DATA HAS QED GATHERED

° NUMBER OF SCHOOL DISTRICTS WITH MICROCOMPUTERS	6,473		
° NUMBER OF SCHOOL DISTRICTS WITHOUT MICROCOMPUTERS		10,459	
° PERCENTAGE OF SCHOOL DISTRICTS WITH MICROCOMPUTERS			33.2
° NUMBER OF SCHOOLS WITH MICROCOMPUTERS	14,132		
° NUMBER OF SCHOOLS IN DISTRICTS WITH MICROS (INDIVIDUAL SCHOOLS USING UNKNOWN)	3,097		
	17,229		
° NUMBER OF SCHOOLS IN DISTRICTS WITH MICROS (INDIVIDUAL SCHOOLS NOT USING YET)		32,567	
° PERCENTAGE OF SCHOOLS USING MICROS IN DISTRICTS WITH MICROS			28.4 / 34.6
° PERCENTAGE OF ALL SCHOOLS USING MICROS			16.5 / 20.1
° NUMBER OF SCHOOLS IN DISTRICTS NOT USING MICROS	35,951		
° NAMES OF MICROCOMPUTER SUPERVISORS AT SCHOOL DISTRICT ADDRESS	6,600		

WHAT KIND OF DISTRICT HAS MICROS?

° THE LARGER THE STUDENT ENROLLMENT THE MORE LIKELY THE DISTRICT IS TO HAVE MICROS

NO. STUDENTS	NO. DISTRICTS WITH MICROS	TOTAL DISTRICTS	% WITH MICROS
25,000+	220	281	78.3
10,000-25,000	378	564	67.0
5,000-10,000	660	1,093	60.4
2,500-5,000	1,092	2,081	52.5
1,000-2,500	1,705	3,712	45.9
600-1,000	819	1,933	42.4
300-600	845	2,408	35.1
UNDER 300	629	4,374	14.4
REGIONAL UNITS	125	486	25.7

NUMBERS INCLUDE SUBDISTRICT UNITS OF LARGER DISTRICTS.

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WHAT MICROCOMPUTER BRAND INFORMATION HAS QED GATHERED

BRAND	# OF SCHOOL DISTRICTS WITH MICROCOMPUTERS	PERCENTAGE	# OF SCHOOL BUILDINGS WITH MICROCOMPUTERS	PERCENTAGE
Y (BRAND UNKNOWN OR MIXTURE)	4,252	65.7	7,023	49.7
APPLE	1,362	21.0	3,989	28.2
RADIO SHACK	581	9.0	1,849	13.1
COMMODORE PET	137	2.1	642	4.5
OTHERS (BRANDS OTHER THAN ABOVE)	141	2.2	629	4.4
TOTAL	6,473		14,132	

THE PREDOMINANT BRAND IN BOTH DISTRICTS AND BUILDINGS IS APPLE, OF THOSE BRANDS WHICH WERE IDENTIFIED.

OF QED SCHOOLS WITH BRAND INFORMATION, WHO HAS THE LARGEST MARKET SHARE

APPLE	1,362	61.3	3,989	56.1
RADIO SHACK	581	26.2	1,849	26.0
COMMODORE PET	137	6.2	642	9.1
OTHER	141	6.4	629	8.9

QED BRAND INFORMATION RELATES TO NUMBER OF INSTITUTIONS WITH MICROS, NOT TO NUMBER OF UNITS.

WHAT KINDS OF SCHOOLS USE MICROS?

- URBAN AND SUBURBAN SCHOOLS ARE MORE LIKELY TO HAVE MICROS: RURAL SCHOOLS ARE LESS LIKELY

SCHOOL TYPE	SCHOOLS WITH MICROS	TOTAL SCHOOLS	% WITH MICROS
SUBURBAN	6,184 (7,665)	34,159	18.1 (22.5)
URBAN	3,168 (3,564)	15,480	20.5 (23.0)
RURAL	4,759 (5,977)	35,982	13.2 (16.6)

- LARGER SCHOOLS ARE MORE LIKELY TO HAVE MICROS.

SCHOOL SIZE	SCHOOLS WITH MICROS	TOTAL SCHOOLS	% WITH MICROS
1,500+	1,598 (1,656)	2,857	55.9 (57.9)
1,000- 1,500	1,917 (2,020)	4,652	41.2 (43.2)
750-1,000	1,816 (2,030)	6,842	26.5 (29.7)
500-750	2,961 (3,509)	17,567	16.8 (19.8)
300-500	3,105 (3,769)	24,339	12.7 (15.5)
100-300	2,275 (3,290)	21,430)	10.6 (15.3)
UNDER 100	460 (968)	8,060)	5.7 (12.0)

(xxx) = NUMBER OF SCHOOLS WITH MICROS PLUS SCHOOLS IN DISTRICTS WHERE INDIVIDUAL SCHOOL UNKNOWN

HOW DOES INSTRUCTIONAL DOLLARS PER PUPIL RELATE TO PRESENCE OF MICROCOMPUTERS?

SPENDING CATEGORY	NO. WITH MICROS	TOTAL	PERCENTAGE WITH MICROS
DISTRICTS			
LOW-SPENDING	770	2,816	27.3
MEDIUM-SPENDING	3,525	9,538	36.9
HIGH-SPENDING	2,178	4,578	47.5
TOTAL	6,473	16,932	38.2
BUILDINGS			
LOW-SPENDING	841	8,308	10.1
MEDIUM-SPENDING	6,869	49,394	13.9
HIGH-SPENDING	6,422	28,045	22.9
TOTAL	14,132	85,747	16.5

*HIGHER-SPENDING DISTRICTS AND SCHOOLS ARE MORE LIKELY TO HAVE MICROCOMPUTERS

HIGH-SPENDING: $65.00+ MEDIUM-SPENDING: $35.00-64.99 LOW-SPENDING: UNDER $35.00

HOW DOES RELATIVE WEALTH/POVERTY OF THE COMMUNITY RELATE TO MICROCOMPUTERS?

RELATIVE WEALTH *	NO. WITH MICROCOMPUTERS	TOTAL	PERCENTAGE WITH MICROS
OVER 95%	1,375	1,942	70.8
90-95%	1,767	2,897	60.9
85-89%	1,250	2,198	56.8
75-84%	1,127	2,423	46.5
UNDER 75%	722	2,153	33.5

OVER 95%	3,834	11,819	31.6
90-95%	3,616	18,941	19.1
85-89%	2,533	14,714	17.2
75-84%	2,946	19,786	14.9
UNDER 75%	1,203	13,117	9.2

THE WEALTHIER THE COMMUNITY, THE MORE LIKELY THE DISTRICT/ SCHOOL IS TO HAVE MICROCOMPUTERS.

* RELATIVE WEALTH/POVERTY: CALCULATED DISTRICT-BY-DISTRICT BASED ON THE PERCENTAGE OF SCHOOL-AGE CHILDREN FALLING ABOVE THE POVERTY GUIDELINE QUALIFIYING FOR TITLE I MONIES.

WHAT KIND OF PEOPLE ARE THE MICROCOMPUTER SUPERVISORS QED OBTAINED BY NAME?

QED Code 044	Microcomputer Supervisors, District-Level	3,246
QED Code 063	Microcomputer Supervisors, Building-Level	3,247
		6,493

- Two out of Three Microcomputer Supervisors have no other district-level Job Functions.
- One out of Three Microcomputer Supervisors has other district-level Job Functions

Curriculum K-12	20%
Mathematics	14%
Library Services	11%
Audiovisual Services	11%

°Ten Most Commonly Shared Job Functions

1. Curriculum K-12
2. Mathematics K-12
3. Library Services
4. Audiovisual Services
5. Federal Programs
6. Assistant Superintendent
7. ESEA Title I
8. Gifted and Talented
9. Vocational Education
10. Reading K-L2

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HOW DOES THE PERCENTAGE OF MINORITY STUDENTS RELATE TO PRESENCE OF MICROS?

MINORITY PERCENTAGE	NUMBER WITH MICROS	TOTAL	PERCENTAGE WITH MICROS
DISTRICTS			
BLACK			
UNDER 1%	4,628	12,263	27.3
1-25%	1,454	3,440	41.8
25-50%	249	717	34.7
OVER 50%	142	474	29.9
HISPANIC			
UNDER 1%	4,794	15,253	31.4
1-10%	1,205	2,696	44.7
10-20%	194	521	37.2
OVER 20%	280	936	29.9

DISTRICTS WITH LESS THAN 1% OF EITHER MINORITY TEND TO BE RURAL DISTRICTS WITH A LOWER PERCENTAGE OF MICROCOMPUTERS.

DISTRICTS WITH SOME MINORITY PERCENTAGE ARE MORE LIKELY TO HAVE MICROCOMPUTERS IF THE MINORITY PERCENTAGE IS LOW.

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DOES SCHOOL TYPE MAKE ANY DIFFERENCE IN RELATIONSHIP BETWEEN ENROLLMENT AND MICROS?

SCHOOL TYPE	STUDENT ENROLLMENT							
	UNDER 100	100-300	300-500	500-750	750-1,000	1,000-1,500	1,500+	
ELEM	176	1,080	1,846	1,298	427	1,917	42	WITH MICROS
	4,969	15,667	18,910	11,463	2,733	814	93	TOTAL SCHOOLS
	3.5%	6.9%	9.8%	11.3%	15.6%	25.1%	45.2%	PERCENTAGE
JR HI	99	475	586	869	616	415	115	WITH MICROS
	933	3,421	3,835	4,550	2,745	1,548	283	TOTAL SCHOOLS
	10.6%	13.9%	15.3%	19.1%	22.4%	26.8%	40.6%	PERCENTAGE
SR HI	185	720	673	794	773	1,298	1,441	WITH MICROS
	1,954	3,715	2,848	2,634	1,905	2,648	2,479	TOTAL SCHOOLS
	9.5%	19.4%	23.6%	30.1%	40.6%	49.0%	58.1%	PERCENTAGE
TOTAL	460	2,275	3,105	2,961	1,816	1,917	1,598	WITH MICROS
	8,060	21,430	24,339	17,567	6,842	4,652	2,857	TOTAL SCHOOLS
	5.7%	10.6%	12.8%	16.9%	26.5%	41.2%	55.9%	PERCENTAGE

ACROSS ALL SCHOOL TYPES, STUDENT ENROLLMENT IS AN EXTREMELY STRONG PREDICTOR OF MICROS.

SIMILARLY, STUDENT ENROLLMENT IS THE SINGLE STRONGEST PREDICTOR OF DISTRICT USE OF MICROS.